

9<sup>th</sup> International Conference on Accelerator Mass Spectrometry (AMS-9)  
Nagoya University, Chikusa, Nagoya, Japan  
September 9-13, 2002

Second Circular of AMS-9  
March 2002

### **Opening Address**

The 9<sup>th</sup> International Conference on Accelerator Mass Spectrometry (AMS-9) will start with two pre-conference workshops the first to be held on September 6, 2002, at the Micro Analysis Laboratory, Tandem Accelerator (MALT) of The University of Tokyo, and the second on September 7, 2002, at the National Museum of Japanese History (called REKIHAKU) in the Tokyo area. Then the venue moves from Tokyo to Nagoya. The main conference will be from September 9 to September 13, 2002, at the Toyota Auditorium of Nagoya University, located at the Higashiyama Campus, Chikusa-ward, Nagoya-city, Aichi prefecture, Japan.

This circular provides information on programs of pre-conference workshops and main conference, on procedures of registration and submission of abstracts and on arrangements for accommodation and social events. All colleagues and friends who engage in AMS researches are welcome to join the AMS-9. Let us enjoy the scientific discussion.

### **Conference Correspondence Address**

AMS-9 Conference  
Center for Chronological Research, Nagoya University  
Chikusa, Nagoya 464-8602 Japan  
Tel: +81-52-789-3082, Fax: +81-52-789-3092  
E-mail:ams9@nendai.nagoya-u.ac.jp

### **Conference Web Page**

Information on the conference is available on our web page,  
<http://www.nendai.nagoya-u.ac.jp/AMS-9/>

### **Conference Chairperson**

Toshio Nakamura, Center for Chronological Research, Nagoya University  
E-mail: nakamura@nendai.nagoya-u.ac.jp

### **International Advisory Committee**

D. Elmore, USA  
L. K. Fifield, Australia  
H. E. Gove, USA  
P. M. Grootes, Germany  
Z. Guo, China  
R. E. M. Hedges, UK  
J. Heinemeier, Denmark  
A. J. T. Jull, USA  
J.C. Kim, Korea  
W. Kretschmer, Germany

W. Kutschera, Austria  
A. E. Litherland, Canada  
E. Nolte, Germany  
M. Paul, Israel  
G. Possnert, Sweden  
K. H. Purser, USA  
G. M. Raisbeck, France  
S. H. Sie, Australia  
M. Suter, Switzerland  
C. Tuniz, Australia  
J. van der Plicht, Netherlands  
J. S. Vogel, USA  
K. von Reden, USA  
F. Yiou, France

### **Organizing Committee**

Mineo Imamura, National Museum of Japanese History (REKIHAKU)  
Hiroyuki Kitagawa, Nagoya University  
Toshikatsu Kitamura, Mutsu Establishment, Japan Atomic Energy Research Institute (JAERI)  
Koichi Kobayashi, Institute of Accelerator Analysis, Ltd.  
Hiroyuki Matsuzaki, The University of Tokyo  
Shiro Mitarai, Kyushu University  
Hatsuho Miyada, Tono Geoscience Center, Japan Nuclear Cycle Development Institute (JNC)  
Masafumi Murayama, Kochi University  
Hisao Nagai, Nihon University  
Yasuo Nagashima, University of Tsukuba  
Masanobu Nakamura, Kyoto University  
Toshio Nakamura, Nagoya University  
Kunihiko Nishiizumi, University of California, Berkeley  
Hirotaka Oda, Nagoya University  
Mitsuru Okuno, Fukuoka University  
Yasuyuki Shibata, National Institute for Environmental Studies (NIES)  
Minoru Yoneda, National Institute for Environmental Studies (NIES)  
Kunio Yoshida, The University of Tokyo

### **Secretaries (at Nagoya University)**

Hiroki Enami  
Akiko Ikeda  
Yukio Ishizuka  
Takenori Kato  
Etsuko Niu  
Takefumi Oda  
Yuri Tanaka  
Fumio Udo

### **Local Advisory Committee**

Michiaki Furukawa, Emeritus Prof., Nagoya Univ.

Kimiaki Masuda, Prof., Nagoya University  
Toshiyuki Masuzawa, Prof., Nagoya Univ.  
Kazuhiro Suzuki, Prof., Director of the Center for Chronological Research., Nagoya Univ.

### **Scope of the Program**

AMS-9 succeeds the tradition of the past AMS conferences that began from Rochester (1978) and continued through Argonne (1981), Zurich (1984), Niagara-on-the-Lake (1987), Paris (1990), Canberra and Sydney (1993), Tucson (1996), and most recently Vienna (1999). The conference focuses on both technical and application advances in AMS that have occurred in the past three years since the Vienna conference.

Two pre-conference workshops are planned. The first one focuses on physical and chemical behavior of meteoric  $^{10}\text{Be}$  in the environmental system. The second one is on applications of cosmogenic nuclides to problems in geoarchaeology. Details are described later.

Themes of sessions are similar to previous conferences: new AMS facilities; status of current AMS facilities; technical progresses (ion source, detection methods, sample preparation, data acquisition and analysis, background reduction, etc.); AMS standards and reference materials; international inter-comparison; radiocarbon calibration; general applications (oceanography, ground water, atmosphere, sediments, ice, archaeology, cultural property science, biomedical and biochemical sciences, nuclear safeguards, heavy nuclides, material science, forensic problems, etc.); and future directions. Proposing a new theme is welcomed.

Poster presentation is as usual a very important way of showing new results and exchanging ideas and opinions. Many poster contributions are welcomed and a competition for the best posters is planned.

### **Conference Language**

The official conference language is English.

### **Tentative Schedule of AMS-9**

Friday, September 6, 2002, pre-conference workshop-I at The University of Tokyo

09:00 – 09:30	Registration
09:30 – 09:40	Opening of workshop on “Meteoritic $^{10}\text{Be}$ in environmental systems”
09:40 – 12:00	Workshop continued
12:00 – 14:00	Lunch break
14:00 – 17:00	Workshop continued
17:00 – 19:00	Visiting MALT and welcome reception

Saturday, September 7, 2002, pre-conference workshop-II at the National Museum of Japanese History (REKIHAKU)

08:30 – 09:00	Registration
09:00 – 09:20	Opening of workshop on “Applications of cosmogenic nuclides to problems in geoarchaeology”
09:20 – 12:00	Workshop continued
12:00 – 14:00	Lunch break, visiting the museum

14:00 – 17:00 Workshop continued

Sunday, September 8, 2002, move from Tokyo to Nagoya, preferably by Shinkansen train

17:00 – 20:00 Registration and welcome reception

Monday, September 9, 2002

08:00 – 09:00 Registration

09:00 – 09:30 Opening of AMS-9

09:30 – 10:30 Keynote speech: AMS applications

10:30 – 11:00 Coffee break

11:00 – 12:00 Keynote Speech: AMS techniques

12:00 – 14:00 Lunch break

14:00 – 15:30 Oral Session: (may be parallel)

15:30 – 16:00 Coffee break

16:00 – 19:00 Poster session 1

Tuesday, September 10, 2002

09:00 – 10:30 Oral Session: (may be parallel)

10:30 – 11:00 Coffee break

11:00 – 12:30 Oral Session: (may be parallel)

12:30 – 14:00 Lunch break

14:00 – 15:30 Oral Session: (may be parallel)

15:30 – 16:00 Coffee break

16:00 – 17:30 Oral Session: (may be parallel)

17:30 – 20:00 AMS lab. tour

Wednesday, September 11, 2002, Full day tour and conference dinner at the Meiji-mura Village

08:30 – 17:00 Full-day tours

17:00 – 20:00 Conference dinner/banquet

Thursday, September 12, 2002

09:00 – 10:30 Oral Session: (may be parallel)

10:30 – 11:00 Coffee break

11:00 – 12:30 Oral Session: (may be parallel)

12:30 – 14:00 Lunch break

14:00 – 15:30 Oral Session: (may be parallel)

15:30 – 16:00 Coffee break

16:00 – 19:00 Poster session 2

Friday, September 13, 2002

09:00 – 10:30 Oral Session: (may be parallel)

10:30 – 11:00 Coffee break

11:00 – 12:30 Oral Session: (may be parallel)

12:30 – 14:00 Lunch break

14:00 – 15:30 Oral Session: (may be parallel)

15:30 – 16:00 Coffee break

16:00 – 17:30 Conference summary

17:30 – 20:00

Farewell party (Nagoya Beer Garden/ Barbecue Restaurant)

### **Pre-Conference Workshops**

#### **Workshop-I:**

#### **Workshop on meteoric $^{10}\text{Be}$ in environmental systems: applications and limitations to chronologic and rate studies**

The University of Tokyo

Bunkyo, Tokyo, Japan

Friday, September 6, 2002

$^{10}\text{Be}$  is a major nuclide in the field of AMS. There are many potential applications using meteoric  $^{10}\text{Be}$ , which is produced mainly in the upper atmosphere. Meteoric  $^{10}\text{Be}$  delivered by rainfall occurs at much higher concentrations and undergoes transfer processes that are distinct from in situ  $^{10}\text{Be}$ .

Detailed examinations of physical and chemical behaviors of  $^{10}\text{Be}$  in various environmental systems are needed for proper use of  $^{10}\text{Be}$  as a precise clock or a reliable tracer. There are many questions about transfer processes of  $^{10}\text{Be}$  precipitated on land.

This workshop will focus on physical and chemical behaviors of  $^{10}\text{Be}$  in surficial environments.

Topics include:

- precipitation from the atmosphere and transfer back to the atmosphere,
- mobility and mean residence time in soil,
- interaction with ground waters,
- chemical and mineralogical studies on the elemental Be,
- availability and interpretation of  $^{10}\text{Be}$  concentration data in specific site studies such as rainfall, soils, terrestrial (e.g., aeolian, fluvial, estuarine, lacustrine) and marine sediments, ice, etc.

Presentations on practical applications of  $^{10}\text{Be}$  such as the chronology of surface and buried soils, tracing of eroded soil particles, and comparison of sediment yields from eroding basins are encouraged.

Topics related to in-situ  $^{10}\text{Be}$  are NOT intended to be included.

Persons who will contribute to this workshop **will be requested an extended abstract in addition to the short abstract that is required for the general paper submission for AMS-9.** Detailed information will be sent to those who apply papers for this workshop by the end of June, 2002.

Organizers:

Dr. Hisao Nagai,

Department of Chemistry,

College of Humanities and Sciences,

Nihon University,

3-25-40 Sakura-Josui, Setagaya-ward,

Tokyo 156-8550, JAPAN

Fax:+81-3-5317-9433

E-mail: hnagai@chs.nihon-u.ac.jp

Drs. Yuji Maejima and Hiroyuki Matsuzaki,  
Research Center for Nuclear Science and Technology,  
The University of Tokyo,  
2-11-16 Yayoi, Bunkyo-ward,  
Tokyo 113-0032, JAPAN  
Fax: +81-3-5841-2950  
E-mail: hmatsu@malt.rcnst.u-tokyo.ac.jp

Dr. Milan J. Pavich  
MS 926A  
National Center USGS  
Reston, VA 20192, USA  
E-mail: mpavich@usgs.gov

### **Workshop-II:**

#### **Workshop on applications of cosmogenic nuclides to problems in geoarchaeology**

National Museum of Japanese History  
Sakura, Chiba prefecture, Japan  
Saturday, September 7, 2002

We have organized a small workshop on some topical issues in geoarchaeology and also novel uses of cosmogenic radionuclides for underground and underwater applications. This workshop will precede the AMS-9 Conference to be held in Nagoya,

The workshop will have 3 themes:

1. Interpretation of multiple dates for archaeological sites and related issues
2. Application of cosmogenic nuclides other than radiocarbon to archaeological studies.
3. Application of cosmogenic nuclides underground and underwater

The first theme is related to the problems in interpreting series of  $^{14}\text{C}$  dates, which sometimes is essential in reconstructing the archaeological facts. Examples with which we may be confronted include ones such as how to interpret results that do not appear to be consistent with other archaeological observations and how to incorporate other dates by different methods such as thermoluminescence (TL) and optically stimulated luminescence (OSL) and electron spin resonance (ESR) methods.

A second theme is the use of cosmogenic nuclides other than  $^{14}\text{C}$  in the study of archaeological samples. There have been a few studies that have attempted to apply in-situ-produced nuclides to archaeological problems or the use  $^{10}\text{Be}$  to trace the provenance of pottery, for example.

The third theme is the use of in-situ cosmogenic nuclides underground and underwater for geology and geoarchaeology. This includes the studies such as a land-bridge study with cosmogenic nuclides underwater and burial dating with in-situ cosmogenic nuclides.

Between the morning and afternoon sessions, the participants can view the museum exhibitions.

Sakura is conveniently located on the train line between Narita airport and downtown Tokyo.

Workshop Organizers:

Dr. Mineo Imamura

National Museum of Japanese History (REKIHAKU)

117 Jo-nai, Sakura, Chiba 285-8502 Japan

Fax: +81-43-486-4299

E-mail: [imamura@rekihaku.ac.jp](mailto:imamura@rekihaku.ac.jp)

Dr. Zhiyu Guo

Peking University

Beijing, China

E-mail: [zhyguo@pku.edu.cn](mailto:zhyguo@pku.edu.cn)

Dr. A.J. Timothy Jull

University of Arizona

Tucson, AZ 85721 USA

Fax: +1-520-621-9619

E-mail: [jull@u.Arizona.edu](mailto:jull@u.Arizona.edu)

Dr. Susan Ivy Ochs

ETH Honggerberg

Zurich, Switzerland

Fax: +49-1-633-1067

E-mail: [ivy@particle.phys.ethz.ch](mailto:ivy@particle.phys.ethz.ch)

### **Registration**

Please, fill out the registration form and send it to the Japan Travel Bureau (JTB) Event & Convention Service (JECS) address by e-mail, postal mail or facsimile at your earliest convenience. The standard conference fee allows participants to attend all Scientific Sessions, the Conference Dinner and Coffee Breaks and includes one copy of the Book of Abstracts and the volume of the Conference Proceedings. Please note that the conference fee will increase if you pay after May 31, 2002.

If you wish to attend the pre-conference workshops, you are requested to pay a small additional fee. Please indicate which pre-conference workshops you will attend on the registration form.

### **Paper Submission**

Participants are welcome to contribute to the scientific program by submitting an abstract related to one of the subjects that appear in “the Scope of the Program”. Three categories of contributions are possible, i.e., pre-conference workshop, conference session, and poster. Your preference should be clearly marked at the submission of the abstract, along with the topic number. You may attend and make presentations at both the two workshops and the main conference. However, please be sure not to present papers of the same content at both workshops and conference sessions.

Abstracts should be typed in 11-point font 1.5 spacing between lines. They must fit into a frame

with a size of 24 cm height x 15 cm width (9.5 in. x 6 in.). The text should be formed as follows: Title (**bold**), list of authors with affiliations (underline the presenting author), actual text, references and footnotes (see also sample abstract below). No figures are accepted. Please provide us an electronic version of your abstract. Microsoft Word and WordPerfect files are accepted. Electric copy may be provided by e-mail as an attached file. Diskettes submissions are also acceptable. Make clear whether you want to present your work at a workshop, at a conference session or as a poster, and also state whether you intend to submit a manuscript for the Conference Proceedings. Any questions can be submitted to the conference mailing address given below.

The deadline for all abstracts for the two workshops, conference sessions and poster sessions is May 31, 2002.

Conference mailing address:

AMS-9 Conference

Center for Chronological Research, Nagoya University

Chikusa, Nagoya 464-8602 Japan

Tel: +81-52-789-2579, Fax: +81-52-789-3092

E-mail: ams9@nendai.nagoya-u.ac.jp

For correspondence regarding abstracts, please submit, on a separate sheet, the full address (including department and institution), fax number, and e-mail address of the corresponding author and other information using the "Paper Submission Form" attached in this text. Please note that submission of abstracts does not imply registration for the AMS-9 Conference.

### **Posters**

Posters will be presented in the first half of the week, from Monday to Tuesday, and in the later half, from Thursday to Friday. Between the two periods, posters will be renewed. The core time will be 16:00 - 20:00 Monday and Thursday, respectively. At least one of the authors should present at the poster.

The maximum width of the posters is 95 cm. The height is 150 cm (the actual full height of the poster boards is as high as 180 cm measured from the floor).

Abstracts for poster presentation should be submitted with the regular abstract submission form as instructed above. Deadline for submission is May 31, 2002.

### **Conference Proceedings**

The AMS-9 Conference Proceedings will be published as a special volume of Nuclear Instruments and Methods in Physics Research B (NIM B). Invited papers will be limited to 8 pages in the journal, and contributed papers will be limited to 4 pages. Please indicate at the time of submission of your abstract whether you intend to submit a manuscript for the proceedings. Each submitted paper will undergo the standard refereeing procedure for NIM B. The total number of pages of the proceedings will be limited to 1000.

Following the successful custom begun with AMS-8, we will demand manuscripts for the proceedings not at the time of the conference, but about one month after the conference. Most

participants welcomed this change as it allowed editing of manuscripts to take into account discussion that occurred at the conference. In order to meet the publishing schedule of the proceedings, however, a deadline for submission of manuscripts will be set at November 1, 2002. Detailed submission formats will be announced later.

No manuscript will be accepted after this deadline.

### **Industrial Exhibition**

During the each conference day, there will be opportunity for companies related to AMS techniques and applications to present and advertise their products. Any company interested in displaying their products at the conference should contact the local organizing committee through the conference mailing address:

AMS-9 Conference, Center for Chronological Research, Nagoya University,  
Chikusa, Nagoya 464-8602 Japan

Tel:+81-52-789-3082, Fax:+81-52-789-3092, e-mail:ams9@nendai.Nagoya-u.ac.jp

### **Travel and Transportation**

#### **Tokyo area for attending the pre-conference workshops**

You will arrive at the Tokyo Narita International Airport (<http://www.narita-airport.or.jp>). The Narita Airport is the biggest airport in Japan and is served by major carriers in the world. Tokyo is about 100km west from the Narita Airport. There are several ways to reach Tokyo from Narita Airport. Transportation possibilities are well described on the web site, <http://www.narita-airport.or.jp>. The pre-conference workshop-I is to be held at The University of Tokyo. You may get a useful guide to get to the venue at the web sites, <http://www.u-tokyo.ac.jp>, and <http://www.malt.rcnst.u-tokyo.ac.jp>.

The venue of the pre-conference workshop-II is the National Museum of Japanese History, located about 10km west from Narita Airport. You may get a good guide from the web site, <http://www.rekihaku.ac.jp>. If you have any problems, please feel free to enquire with the workshop organizers or at the conference correspondence address.

#### **Nagoya area for attending the main conference**

##### **To the conference venue from your hotel**

Nagoya University is located in the east part of Nagoya City. Nagoya University has three campuses, Higashiyama, Tsurumai and Daiko Campuses. The conference venue, Toyota Auditorium, is on the Higashiyama Campus. You can find a good guide to the Higashiyama Campus on the web site, <http://www.nagoya-u.ac.jp>. It is convenient to use the Higashiyama line of the Nagoya City Subway System (<http://www.kotsu.city.nagoya.jp/index-e.html>) to get to the Higashiyama Campus, Nagoya University.

##### **To your hotel from the Nagoya JR train station**

Hotels are in the downtown area of Nagoya city. It is easy to use the subway service to move from the Nagoya JR train station to your hotels. If you carry heavy luggages, you may want to use taxi service, which may cost less than 2,000 Yen.

##### **To your hotel from the Nagoya International Airport**

The Nagoya International Airport (<http://www.nagoya-airport-bldg.co.jp>) is located 20 km north

from the city center and is served by several major carriers in the world. Connecting flights are available from Narita to Nagoya, but not from Osaka.

Transportation from the airport to the city is possible by either taxi or shuttle bus. There is no subway service. A rental car is not convenient. Bus service from the airport to the Nagoya JR train station is available every 10 minutes. The fare is 870 Yen. The trip takes about 30 min. By taxi, it will cost about 6,000 Yen to travel from the airport to your hotel.

International Airlines flying to the Nagoya International Airport

City from	Air line	City from	Air line	City from	Air line
Auckland	NZ	Bangkok	JL, TG	Beijing	JA, CA
Cairns	QF	Cheju	KE	Chongqing	SZ
Christchurch	NZ	Denpasar	GA	Detroit	NW
Frankfurt	LH	Guam	CO, JO	Hong Kong	CX
Honolulu	JO	Kuala Lumpur	MH	Los Angeles	RG
Manila	NW, JL	New York	NW	Pusan	KE, JL
Rio de Janeiro	RG	Saipan	CO	Sao Paulo	RG
Seoul	JL, KE, OZ	Shanghai	WH, MU	Singapore	SQ
Sydney	QF	Taipei	CX, EG, CI	Tianjin	CA, JL
Vancouver	AC	Xi'an	WH	Dalian	CA

(As of March 31, 2002)

Transportation from Narita International Airport to Nagoya

To get from Narita to the Tokyo JR train station (to connect with the “Shinkansen” from Tokyo to Nagoya), 2 ways are recommended:

1. An express train (Narita Express-N'EX) from the Narita Airport to the Tokyo JR train station (1 hour). It costs 2,940 Yen.
2. A non-stop limousine bus service is available, leaving Narita airport every 15 minutes (100 min.). It costs 3,000 Yen.

You may try to find other cheaper ways, if you want to be a good explorer.

It will take about 2 hours from Tokyo station to Nagoya JR train station by bullet train, Shinkansen “Hikari”. It costs 10,580 Yen.

If you plan to stay in Tokyo overnight before proceeding to Nagoya, other limousines from Narita airport to major Tokyo hotels are available (<http://www.narita-airport.or.jp>). It will cost about 3,000 Yen.

Transportation from Kansai International Airport (Osaka) to Nagoya

Take an express train, “Haruka”, from the Kansai Airport (<http://www.kansai-airport.or.jp>) to the Shin-Osaka JR train station (50 min and costs 2,980 Yen). From Shin-Osaka to Nagoya JR train station, it will take 1 hour by bullet train, Shinkansen “Hikari”, costing 6,180 Yen.

## **Other Travel Information**

### **JR pass**

Japanese railway (JR) system is a convenient way to travel in Japan but it is expensive. Participants who attended the pre-conference workshops or who arrived in Japan through the Narita International Airport are strongly recommended to use the JR train (“Shinkansen” – bullet train) from Tokyo to Nagoya. It takes less than 2 hours from Tokyo station to Nagoya station (10,580 Yen one way). If you would like to use a train service in Japan, you may want to consider purchasing a JR pass (Japan Rail Pass), available for 7, 14, 21 days, depending on your schedule to stay in Japan. The prices are 28,300 Yen (7 days), 45,100 Yen (14 days) or 57,700 Yen (21 days). You can use all JR system including express trains and “Shinkansen” with reserved seat with JR pass. A JR pass has to be purchased outside Japan by non-Japanese residents. See detail <http://www.jreast.co.jp/jrp>.

### **Rental Car**

Traveling around by car is very expensive in Japan. We have good motor way services in Japan. However, you are normally charged when you use motorways. It is not recommended for participants from abroad to use a rental car in Japan, unless you know the traffic system in Japan very well.

## **Accommodations, Social Activities, Post Conference Tours**

For easy of payment, the registration, accommodation, conference tour, accompanying persons’ programs, farewell party and post-conference tours are being handled by the Japan Travel Bureau (JTB) Event & Convention Service (JECS). JECS will have representatives present throughout the conference at the conference desk at Nagoya University. Further information from JECS is given in another documents. For conference registration, hotel reservation and arrangements for other activities, please fill out the separate application forms: “Registration” and “Accommodation and Other Activities” and send the forms directly to JECS. Do not send these forms to the AMS-9 conference address. Only paper submission forms and abstracts should be sent to the AMS-9 conference address.

## **Important Dates**

May 31, 2002:	Deadline for submission of abstracts
May 31, 2002:	Registration deadline for reduced fee
August 1, 2002:	Deadline for hotel and tour reservations
August 2002:	3 <sup>rd</sup> circular with conference program
September 6-7, 2002:	Pre-conference workshops
September 9-13, 2002:	AMS-9 conference at Nagoya
November 1, 2002:	Deadline for submission of manuscripts for the Proceedings

## Paper Submission Form

9<sup>th</sup> International Conference on Accelerator Mass Spectrometry  
Nagoya University, Nagoya, Japan  
September 9-13, 2002

---

### Paper Submission Form for the main Conference sessions at Nagoya

Please complete one form for each submission of paper in capital letters and return **with the abstract** to the conference correspondence address no later than May 31, 2002.

Title of the Paper: \_\_\_\_\_

\_\_\_\_\_

I intend to present my paper in the conference session with topics No. \_\_\_\_\_  
\_\_\_\_\_ Oral Presentation; \_\_\_\_\_ Poster Presentation; \_\_\_\_\_ Either Oral or Poster Presentation;  
\_\_\_\_\_ If my oral presentation is not accepted, I will withdraw my paper. (Since the number of papers for oral presentation is limited by the available time, your preference of oral presentation may be shifted to poster presentation, according to the selected topics)

Do you intend to submit a paper to the Conference Proceedings? \_\_\_\_\_ Yes \_\_\_\_\_ No

Name(s) of Author(s) (mark the presenting author name with \*): \_\_\_\_\_

\_\_\_\_\_

Address of the Presenting Author: \_\_\_\_\_

\_\_\_\_\_

City: \_\_\_\_\_ Post/Zip code: \_\_\_\_\_ Country: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

### Conference Session Topics:

- | No. | Session Topics                   |
|-----|----------------------------------|
| 1.  | New AMS facilities               |
| 2.  | Status of current AMS facilities |
| 3.  | Technical progress               |
| 3-1 | Ion source,                      |
| 3-2 | Detection method                 |
| 3-3 | Sample preparation               |

- 3-4 Data acquisition and analysis
- 3-5 Background reduction
- 3-6 Others
- 4. AMS Standards and reference materials
- 5. Radiocarbon Calibration
- 6. General applications
  - 6-1 Oceanography
  - 6-2 Ground water
  - 6-3 Atmosphere
  - 6-4 Sediments
  - 6-5 Ice
  - 6-6 Archaeology
  - 6-7 Cultural property science
  - 6-8 Biomedical and biochemical sciences
  - 6-9 Nuclear safeguards
  - 6-10 Heavy nuclides
  - 6-11 Material Science
  - 6-12 Forensic problems
  - 6-13 Others
- 7. Future directions

Some of the sessions or topics have been proposed personally or by groups:

**AMS standards and reference materials** (Session topics No.4) by Drs. Kunihiko Nishiizumi and Marian Scott. E-mail: kuni@ssl.berkeley.ac.jp, marian@stats.gla.ac.uk

Isotopic primary and secondary standards and reference materials are vital for the provision of high quality measurements and for quality assurance in the natural sciences. We invite submission of oral presentations and posters on the subject of AMS standards and reference materials. Topics might include amongst others: new standards, the comparison and calibration of standards, laboratory inter-comparison, problems with existing standards and the needs for new materials.

**Nuclear safeguards** (Session topics No. 6-10) by Drs. Claudio Tuniz, Masanobu Nakamura and Yasuo Nagashima. E-mail: claudio.tuniz@dfat.gov.au, nakamura@ne.scphys.kyoto-u.ac.jp, nagashima@tac.tsukuba.ac.jp

This topic includes the use of AMS in nuclear non-proliferation applications, particularly those based on the use of AMS for detecting  $^{236}\text{U}$  and other actinides in the environment.

**Forensic problems** (session topics No. 6-13) by Dr. Ugo Zoppi. E-mail: ugo@ansto.gov.au

This topic deals with the  $^{14}\text{C}$  bomb pulse to estimate carbon sources and/or production year of food, medicine, harmful drugs, etc., for forensic applications.

We also have a few proposals to support sessions. Any proposals and suggestions to scientific program of AMS-9 will be welcomed.

9<sup>th</sup> International Conference on Accelerator Mass Spectrometry  
Nagoya University, Nagoya, Japan  
September 9-13, 2002

---

**Paper Submission Form for the Pre-conference Workshop I (September 6, 2002) in Tokyo  
(Workshop on meteoric <sup>10</sup>Be in environmental systems: applications and limitations to  
chronologic and rate studies)**

Please complete one form for each submission of paper in capital letters and return **with the abstract** to the conference correspondence address no later than May 31, 2002.

Title of the Paper: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you intend to submit a paper to the Conference Proceedings? \_\_\_\_\_ Yes \_\_\_\_\_ No

Name(s) of Author(s) (mark the presenting author name with \*): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Address of the Presenting Author: \_\_\_\_\_  
\_\_\_\_\_

City: \_\_\_\_\_ Post/Zip code: \_\_\_\_\_ Country: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

9<sup>th</sup> International Conference on Accelerator Mass Spectrometry  
Nagoya University, Nagoya, Japan  
September 9-13, 2002

---

**Paper Submission Form for the Pre-conference Workshop II (September 7, 2002) at  
Sakura (Workshop on applications of cosmogenic nuclides to problems in geoarchaeology)**

Please complete one form for each submission of paper in capital letters and return **with the abstract** to the conference correspondence address no later than May 31, 2002.

Title of the Paper: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you intend to submit a paper to Conference Proceedings? \_\_\_\_\_ Yes \_\_\_\_\_ No

Name(s) of Author(s) (mark the presenting author name with \*): \_\_\_\_\_

\_\_\_\_\_

Address of the Presenting Author: \_\_\_\_\_

\_\_\_\_\_

City: \_\_\_\_\_ Post/Zip code: \_\_\_\_\_ Country: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

#### **Sample Abstract for AMS -9**

##### **The HVEE Tandetron AMS system at Nagoya University**

Toshio NAKAMURA<sup>1</sup>, Etsuko NIU<sup>1</sup>, Hirotaka ODA<sup>1</sup>, Akiko IKEDA<sup>1</sup>, Masayo MINAMI<sup>2</sup>, Hiroshi TAKAHASHI<sup>2</sup>, Mamoru ADACHI<sup>2</sup>, and Ludi PALS<sup>3</sup>

<sup>1</sup>Dating and Materials Research Center, Nagoya University, Nagoya/ Japan

<sup>2</sup>Graduate School for Earth and Planetary Sciences, Nagoya University, Nagoya/ Japan

<sup>3</sup>High Voltage Engineering Europe B.V., Amersfoort/ The Netherlands

We have measured <sup>14</sup>C ages of more than 8,000 samples from such various research fields as archaeology, anthropology, geology, geography, hydrology, oceanography, etc., for the past 16 years with a GIC Tandetron AMS system, at the Dating and Materials Research Center, Nagoya University. In 1996, we have introduced another Tandetron AMS system which was the third AMS machine built by High Voltage Engineering Europe (HVEE), B.V., the Netherlands. During the installation of the machine, we have experienced some troubles. A serious one was that the accelerated positive beam was emitted so much downward that the equipped vertical stirrers could not control the beam correctly. After such troubles had been overcome, we conducted successfully the performance tests of the spectrometer in January, 1999. The <sup>14</sup>C/<sup>13</sup>C/<sup>12</sup>C ratios were measured for six graphite targets, in ten minutes each, and for six cycles repeatedly. The targets were prepared from the HOx-II oxalic acid standard by the Univ. of Christian -Albrechts, Germany, and provided to the HVEE for the performance tests at Nagoya. The <sup>14</sup>C count rate was typically 80 cps and the <sup>12</sup>C<sup>3+</sup> and <sup>13</sup>C<sup>3+</sup> currents were 280 nA and 290 nA, respectively, at the terminal voltage of 2.5 MV. The reproducibilities of <sup>14</sup>C/<sup>12</sup>C and <sup>13</sup>C/<sup>12</sup>C ratio measurements for the six targets were very good, resulting in the figures in relative (one) standard deviation of 0.17% and 0.03%, respectively [1].

We have started reliability tests on <sup>14</sup>C measurements with our HVEE tandetron for IAEA standards and some other samples with known age. Our initial application programs of the high-performance AMS system would be;

(1) annual ring samples of trees related with volcanic eruptions are to be dated precisely. The <sup>14</sup>C ages will be used for an accurate age determination of those volcanic events by the wiggle matching method.

[1] T. Nakamura, et al., Nucl. Instrum. Meth. B172, 52-57 (2000).

This work was supported partly by the 'Grant-In-Aid for Scientific Research' of the Japan Society for the Promotion of Science.

---

**JTB Event & Convention Service (JECS)**

The information by the Japan Travel Bureau (JTB) Event & Convention Service (JECS) for the registration and reservations will be given in a separate document. It contains the followings:

**General remarks**

**Registration (registration fee, registration procedure)**

**Accommodations**

**Social programs**

**Programs for accompanying persons**

**Tours (conference excursions, post-conference tours)**

**Applications and payment**

**General information**

**Application form for the registration**

**Application form for accommodation and other activities**